

Patent claims

1. Method for requesting the agreement of a user of a mobile terminal (13) of a mobile radio network (14, 16) to the transfer (8) of their position data (28) to a party (11) requesting this position data (28), where, in the case of the arrival (2) of a request (1) from a requester (11) for the position (28) of the mobile terminal (13) in a switching center (14) of the mobile radio network (14, 16, 15) the switching center (14) causes a database server (26) to make a thorough check (2a) on the basis of data stored there (26) relating to the mobile terminal verification rules (18;21) as to whether an agreement on the mobile terminal side (13) to forward (8) the mobile terminal position to the requester (11) can be obtained (3,4), in which case the result (2b) of this check is sent to the switching center (14), in which case if the result (2b) at least indicates that the agreement can be obtained. a request (3) for clarification of the agreement is sent (3) by the switching center (14) to the mobile terminal (13) and if the agreement is available (4) a transmission (7, 8) of the position (28) of the terminal (13) to the requester (11) takes place.

2. Method according to Claim 1,
in which

the request (1) arrives at a position data acceptance location (GMLC 12) of the mobile radio network.

3. Method in accordance with one of the previous claims
in which,

the switching center (14) is an MSC or SGSN.

4. Method in accordance with one of the previous claims
in which

the switching center (14) request the position of the mobile
5 terminal (13) from a BSS or RAN (15) of the mobile radio network.

5. Method in accordance with one of the previous claims
in which

a verification rules specification (18) can only contain a
prespecified set of different instructions, especially the
10 instructions: Position data transfer without notification, position
data transfer with notification to the mobile terminal, position
data transfer only after agreement (4) of the mobile station or if
no response is received from the mobile station, only transfer
position data with the agreement (4) of the mobile station.

15 6. Method in accordance with one of the previous claims
in which

for a multiplicity of mobile subscriber identity modules (13) and/or
mobile stations (13) verification rules specifications (18;21) and
identity specifications are stored for the mobile terminal or for a
20 mobile subscriber identity module contained in it (18).

7. Method in accordance with one of the previous claims
in which

a switching center (14), especially a Visitor Location Register of a
switching center regularly receives from the Home Location Register
25 (16) of a mobile network the telecommunications address of the
database server (26) or receives it when a mobile terminal registers

at the switching center (14) or its Visitor Location Register VLR.

8. Method in accordance with one of the previous claims
in which

Position data is only transferred (8) to a requester (11) if this is
5 allowed for the period of the recording of the position according to
stored (21) conditions for the user of the mobile station (13) or
its mobile subscriber identity module through attributes (20) stored
in the database.

9. Method in accordance with one of the previous claims
10 in which

the conditions can be changed by the user via their mobile terminal
or another terminal by mobile radio, WAP, Internet, fixed network or
in another way.

10. Method in accordance with one of the previous claims
15 in which

the switching center (14) is the mobile switching center currently
being used by the mobile terminal (13).

11. Method in accordance with one of the previous claims
in which

20 the database server (LCS central privacy location (26) is arranged
in an SCP.

12. Method in accordance with one of the previous claims
in which

the database server (LCS central privacy location 26) is a database
25 which contains the verification rules specifications (18) and
possibly additional attributes (21) and includes an additional unit
which makes the check (20).

13. Method in accordance with one of the previous claims
in which

the entries (18) are stored in the database server (26) but, to make
upwards compatibility with a Home Location Register (HLR 16), which
5 does not support the improvement of the LCS Privacy in accordance
with the invention, entries (18) for a mobile network Home Location
Register (HLR 16) are transmitted on request or at regular
intervals, so that the mobile network Home Location Register (HLR
16) can transmit (step 0) the entries (18) to a switching center
10 (14).

14. Method in accordance with Claim 13
in which

a proportion of the checks (LCS Privacy Checks 20) is performed in
accordance with a classification (19) in the switching center (14)
15 and the result is transmitted (step 2a) as an additional input
parameter to the database server (central privacy location 26).

15. Method in accordance with one of the previous claims
in which

the entries are stored (18) in a Home Location Register (16), only
20 additional attributes (2) are stored in the database server (central
privacy location 26) and the address of the database server (central
privacy location 26) is stored in the HLR.

16. Device for executing the method in accordance with one of the
previous claims.

25 17. Switching device (14), especially in accordance with Claim 16,
- with an input for requests (2) from a requester (11) for position
data (26) of a mobile station (13),
-with an output for transfer (7) of position data (26) to the

requester (11),
- with a memory for an address (24) of a database (26) -with an
interface to a Home Location Register (16) for downloading (0) the
address (24) of the database (26) into the memory of the switching
5 equipment (14),
-where the switching equipment (14) is embodied such that on request
(2) for the position (26) of a mobile terminal (13) in accordance
with the verification rules specifications (18) transferred (2b) to
it from the database (26) asks the mobile station (13) for agreement
10 (3, 4) to transfer its position data (7) and/ or sends it
information.